

What is claimed is:

1. A hydrogen storage material, comprising:
 - a molecule including space formed with a planar sheet constituted by six-membered rings of carbon atoms,
 - 5 wherein at least one opening is formed in the sheet.
2. The hydrogen storage material of claim 1,
 - wherein the molecule is a columnar or prismatic molecule having the sheet as a sidewall, and
 - 10 the opening is formed in any one of an end portion and the sidewall of the molecule.
3. The hydrogen storage material of claim 1,
 - wherein the opening is larger than one of the six-membered rings of
 - 15 carbon atoms.
4. The hydrogen storage material of claim 1,
 - wherein an R value of the hydrogen storage material is not less than 0.02 and not more than 0.10, the R value indicating a ratio of a spectral integrated
 - 20 intensity of D band to a spectral integrated intensity of G band, the spectral integrated intensities being obtained by laser Raman spectroscopic analysis.
5. The hydrogen storage material of claim 1,
 - wherein the molecule is a single-walled carbon nanotube or a multiwalled
 - 25 carbon nanotube.
6. A method of manufacturing a hydrogen storage material, comprising:
 - producing a molecule including space formed with a planar sheet constituted by six-membered rings of carbon atoms; and
 - 30 performing an opening preparation process on the molecule.

7. The method of manufacturing a hydrogen storage material of claim 6,
wherein the molecule is a columnar or prismatic molecule having the
sheet as a sidewall.

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8. The method of manufacturing a hydrogen storage material of claim 6,
wherein the opening preparation process is oxidation treatment.

9. The method of manufacturing a hydrogen storage material of claim 8,
10 wherein the oxidation treatment uses at least one of nitric acid, sulfuric
acid, hydrochloric acid, and a hydrogen peroxide solution.

10. The method of manufacturing a hydrogen storage material of claim 8,
wherein the oxidation treatment uses an oxidative gas.

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11. The method of manufacturing a hydrogen storage material of claim 10,
wherein the oxidative gas contains at least one of air, oxygen, ozone,
chlorine dioxide, chlorine, bromine, iodine, a nitrogen oxide, and a sulfur oxide.

20 12. A hydrogen storage body, comprising:
a hydrogen storage material containing a molecule including space
formed with a planar sheet constituted by six-membered rings of carbon atoms,
wherein at least one opening is formed in the sheet.

25 13. A hydrogen storage device, comprising
a hydrogen storage body including a hydrogen storage material
the hydrogen storage material comprising:
a molecule including space formed with a planar sheet
constituted by six-membered rings of carbon atoms,
30 wherein at least one opening is formed in the sheet.

14. A fuel cell vehicle, comprising:
 - a hydrogen storage device including a hydrogen storage body having a hydrogen storage material,
- 5 the hydrogen storage material comprising:
 - a molecule including space formed with a planar sheet constituted by six-membered rings of carbon atoms,
wherein at least one opening is formed in the sheet.